

Response to First Office Action
Docket No. 020.0329.US.UTL

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (currently amended): A system for providing secure exchange of
2 sensitive information with an implantable medical device, comprising:
3 a crypto key uniquely associated with an implantable medical device to
4 encrypt sensitive information during a data exchange session; and
5 an external source to securely obtain the crypto key over a secure
6 connection from a secure key repository securely maintaining the crypto key, to
7 encrypt the sensitive information using the crypto key and key, to store the
8 sensitive information as encrypted data onto the implantable medical device, and
9 to further store at least a part of the sensitive information as unencrypted data onto
10 the implantable medical device over a secure connection.
- 1 2. (original): A system according to Claim 1, further comprising:
2 a short range interface to logically define a secured area around the
3 implantable medical device within which to securely obtain the crypto key; and
4 a long range interface to logically define a non-secured area extending
5 beyond the secured area within which to exchange the encrypted data.
- 1 3. (original): A system according to Claim 1, wherein the encrypted
2 data is retrieved from the implantable medical device over a non-secure
3 connection and the encrypted data is decrypted as the sensitive data using the
4 crypto key.
- 1 4. (original): A system according to Claim 3, wherein the crypto key
2 is securely retrieved over a secure connection from the secure key repository prior
3 to decrypting the encrypted data.

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1 5. (original): A system according to Claim 3, wherein the encrypted
2 data is retrieved through long range telemetry.

1 6. (original): A system according to Claim 5, wherein the long range
2 telemetry comprises radio frequency telemetry.

1 Claim 7 (canceled).

1 8. (currently amended): A system according to ~~Claim 7~~ Claim 1,
2 wherein the unencrypted data is securely retrieved from the implantable medical
3 device over a secure connection.

1 9. (original): A system according to Claim 1, wherein the crypto key
2 is securely retrieved from the secure key repository through a programmer.

1 10. (original): A system according to Claim 1, wherein the crypto key
2 is maintained on the implantable medical device, and the crypto key is retrieved
3 through short range telemetry.

1 11. (original): A system according to Claim 10, wherein the short
2 range telemetry comprises inductive telemetry.

1 12. (original): A system according to Claim 1, wherein the external
2 source comprises at least one of a programmer and a repeater.

1 13. (original): A system according to Claim 1, wherein the crypto key
2 comprises an encryption key in accordance with the Advanced Encryption
3 Standard.

1 14. (currently amended): A method for providing secure exchange of
2 sensitive information with an implantable medical device, comprising:
3 defining a crypto key uniquely associated with an implantable medical
4 device to encrypt sensitive information during a data exchange session;

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5 securely obtaining the crypto key over a secure connection from a secure
6 key repository securely maintaining the crypto key; [[and]]
7 encrypting the sensitive information using the crypto key and storing the
8 sensitive information as encrypted data onto the implantable medical device; and
9 further storing at least a part of the sensitive information as unencrypted
10 data onto the implantable medical device over a secure connection.

1 15. (original): A method according to Claim 14, further comprising:
2 logically defining a secured area around the implantable medical device
3 within which to securely obtain the crypto key; and
4 logically defining a non-secured area extending beyond the secured area
5 within which to exchange the encrypted data.

1 16. (original): A method according to Claim 14, further comprising:
2 retrieving the encrypted data from the implantable medical device over a
3 non-secure connection; and
4 decrypting the encrypted data as the sensitive data using the crypto key.

1 17. (original): A method according to Claim 16, further comprising:
2 securely retrieving the crypto key over a secure connection from the
3 secure key repository prior to decrypting the encrypted data.

1 18. (original): A method according to Claim 16, further comprising:
2 retrieving the encrypted data through long range telemetry.

1 19. (original): A method according to Claim 18, wherein the long
2 range telemetry comprises radio frequency telemetry.

1 Claim 20 (canceled).

1 21. (currently amended): A method according to ~~Claim 20~~ Claim 21,
2 further comprising:

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3 securely retrieving the unencrypted data from the implantable medical
4 device over a secure connection.

1 22. (original): A method according to Claim 14, wherein the crypto
2 key is securely retrieved from the secure key repository through a programmer.

1 23. (original): A method according to Claim 14, further comprising:
2 maintaining the crypto key on the implantable medical device; and
3 retrieving the crypto key through short range telemetry.

1 24. (original): A method according to Claim 23, wherein the short
2 range telemetry comprises inductive telemetry.

1 25. (original): A method according to Claim 14, wherein the external
2 source comprises at least one of a programmer and a repeater.

1 26. (original): A method according to Claim 14, wherein the crypto
2 key comprises an encryption key in accordance with the Advanced Encryption
3 Standard.

1 27. (currently amended): An apparatus for securely transacting a data
2 exchange session with an implantable medical device, comprising:
3 means for defining a crypto key uniquely associated with an implantable
4 medical device to encrypt sensitive information during a data exchange session;
5 means for securely obtaining the crypto key over a secure connection from
6 a secure key repository securely maintaining the crypto key; [[and]]
7 means for encrypting the sensitive information using the crypto key and
8 means for storing the sensitive information as encrypted data onto the implantable
9 medical device; and
10 means for further storing at least a part of the sensitive information as
11 unencrypted data onto the implantable medical device over a secure connection.

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1 28. (currently amended): An implantable medical device for securely
2 maintaining sensitive information, comprising:
3 an implantable medical device, comprising:
4 a memory to store sensitive information encrypted using a crypto
5 key uniquely associated with an implantable medical device and at least a part of
6 the sensitive information as unencrypted data; and
7 a secure interface to provide access to the stored sensitive
8 information exclusively over a secure connection.

1 29. (currently amended): An method for securely maintaining sensitive
2 information on an implantable medical device, comprising:
3 storing sensitive information encrypted using a crypto key uniquely
4 associated with an implantable medical device and at least a part of the sensitive
5 information as unencrypted data; and
6 providing access to the stored sensitive information exclusively over a
7 secure connection.

1 30. (currently amended): An apparatus for securely maintaining
2 sensitive information on an implantable medical device, comprising:
3 means for storing sensitive information encrypted using a crypto key
4 uniquely associated with an implantable medical device and at least a part of the
5 sensitive information as unencrypted data; and
6 means for providing access to the stored sensitive information exclusively
7 over a secure connection.